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ABSTRACT

The uses of aptitude tests for entry to language training, diagnosis, placement for training, and certification are described. The Language Training Program of the Public Service Commission of Canada provides language training and testing in French and English to public servants required to use either official language. A variety of aptitude tests have been used in combination with other measures to determine whether applicants have the potential to succeed in language training, to establish a learning rate and knowledge level, and to assess the success rate of the program. While aptitude tests have been found to be useful, the number and kinds available for use with this population are limited. The Modern Language Aptitude Test (MLAT) has been the most consistently used, but one or more parallel tests would be welcome, especially in retesting situations. In addition, because of changes in program orientation, policies, the final proficiency test, and the training population, it is possible that the strength of the relationship between the MLAT and the exit examination has been reduced. Efforts to make the most effective use of the existing testing program and to improve the placement process with adoption or adaptation of other measures are ongoing. (MSE)

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The Uses and Limitations of Aptitude Testing in the Language Training Program of the Public Service Commission of Canada.

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BACKGROUND

The Language Training Program (LTP) of the Public Service Commission of Canada provides language training in English and French to public servants who are required to serve the public in either of the two official languages or who must communicate with other public servants in either language. It also offers a wide variety of courses to those wishing to upgrade or refresh their language skills, or those having special job-related language needs. In 1987, there were over 20 000 students registered in various training courses in the Language Training Program. Of these, 17 000 were Anglophone students taking French courses and about 3 000 Francophones taking English courses.*

Currently about 10% of training registrations involves students who are taking courses as a result of staffing decisions where performance in the second official language is required and certification at different proficiency levels are granted. Maximum training time allotments have been set and the LTP operates within these limits.

Important to this examination of the uses and shortcomings of aptitude testing is a brief description of the training program and of the final test of certification. Equally important to the discussion are the changes that both the test of certification and the training program have undergone over the past ten years. In 1978, the LTP announced a major policy change in program orientation. Whereas the program was previously audio-lingual and global in approach, the new orientation was to a communicative and functional curriculum with job-related content. It also focussed on the individual learning needs of the student and aimed to transfer more responsibility for learning to the student. In 1979 the new curriculum for French training was implemented.

The test of bilingual certification used at the time in the Canadian Public Service was the Language Knowledge Examination (LKE). It evaluated three levels or standards of language ability, A, B or C (in ascending order of ability) in the four skills; reading, writing, listening and speaking. For the most part emphasis on this test was on linguistic accuracy rather than communication. For a short period of time the language training program and the criterion measure were thus somewhat incompatible.

* Figures based on number of registrations in language courses.

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Recognizing the necessity for more communicative tests, in 1984 the Public Service Commission replaced the LKE by the Second Language Evaluation (SLE) system. The SLE is composed of three tests measuring reading, writing and oral interaction (oral interaction combines speaking and listening). All three tests emphasize the communicative nature of language with test content based on a study of second language needs within the Public Service of Canada. The Oral Interaction test, for example, uses a rating procedure that evaluates an examinee's ability to function in specified contexts with appropriate content and accuracy.

THE ORIENTATION PROCESS

BACKGROUND

Based on recommendations ensuing from a study of the problems of low achieving students, a Consultation Service was set up in early stages of our language training program. Its goal was to pursue research in order to provide the schools with ways of dealing more effectively with those students. The Service set out to explore the nature of student difficulties and to experiment with alternative teaching approaches and remedial techniques as possible pedagogical solutions.

Students who encountered serious difficulties with the core audio-visual program were referred to this Service. During this initial period, the Consultation Service used the Modern Language Aptitude Test (MLAT) as a diagnostic tool. Results of tests, interviews, teacher observations and feedback from students led to hypotheses and further explorations found links between patterns of behaviours and aptitude subtests scores or performance on certain aspects of subtests tasks.

Students referred to this Service were grouped on such variables as similar MLAT profiles, preferred learning strategies, academic background and prior knowledge of French to form experimental classes. Several alternative teaching approaches were gradually developed to meet the needs and interests of these students.

The findings and recommendations of the Consultation Service gave birth to an orientation process which, by 1973, was established for all students starting full time training. However, under the revised policies of 1981, in order to make language training more cost efficient, only candidates who demonstrate the potential to succeed are allowed to go on intensive language training. The Orientation Service was given the mandate to assess the aptitude to learn a second language. Therefore, the orientation process has become part of the staffing process and its impact is quite important: any candidate applying for a bilingual position who receives a negative prognosis as to his or her chances of success on language training is automatically struck off the eligibility list for that position and as well loses access to full-time language training at government expense.

THE ORIENTATION PROCESS

The orientation process has a twofold objective:

- To establish a linguistic profile which will allow for the choice of the most appropriate pedagogical approach;
- To provide candidates with a training plan stating the estimated time to reach a specific target level as well as providing them with a prognosis as to their chances of success.

Its basic philosophy is to ensure that all those factors known as a source of variance in second language training are taken into consideration and that the pedagogical environment is adapted as much as is practically possible to the characteristics of each student so as to maximize his of her chances of success. In order to do this, it is necessary to establish for each individual his or her own learning profile based on attributes of a cognitive nature and to define his or her learning strategies. It is this approach that the Orientation Service has taken.

The orientation process consists essentially of three steps:

- Testing;
- Interviewing;
- Proposing a training plan.

The battery of tests administered to the candidates includes:

- An aptitude test, the MLAT and parts 5 and 6 of the Pimsleur Language Aptitude Battery - a French version of the MLAT, the "Test d'aptitude aux langues vivantes", was developed for use with the French-speaking student population studying English -;
- A placement test developed by the Language Training Program Branch, which measures the level of knowledge in the target language as it relates to the training programs of the LTP;
- A general questionnaire which provides information on language background, previous training, preferences in learning situations and on other factors which could possibly influence the candidate's performance once on training.

Following preliminary testing, each candidate has a personal interview with a well-trained counsellor who has background in both language teaching and counselling. The personalized approach is important as for the potential trainee, it is only the first of many a step in the bureaucratic process and it is felt that a point of human contact at the earliest stage may render these later steps easier.

Counsellors use the subtest scores to explore dimensions of language learning aptitude which experience has proven relevant for the population and program. These include auditory ability, phonetic coding ability, grammatical sensitivity and rote memory. Scores on the MLAT and Pimsleur subtests yield an aptitude profile for each candidate and supplementary information is gathered via the questionnaire and interview. Counsellors thus analyse the results and identify any pedagogical or psychological factors which might affect learning and discuss with the candidate potential problem areas vis-à-vis the training as well as appropriate learning conditions. The counsellors are then able to recommend the suitable ability stream.

Considerable differences in learning rate among students, the relationship of these differences to aptitude scores, the effect of time pressure on individuals and the need to estimate the training time have made it necessary to use a streaming system. A 1986 sample of 1200 students shows that for the lowest aptitude or "D" group, the average number of hours per lesson was two and a half times greater than for the highest aptitude or "A" group.

The information gathered during the interview also provides counsellors with strong indications as to the most appropriate of the available approaches or methodologies, so as to ensure as much homogeneity of class groups as the administrative constraints permit. A profile of the scores supplemented with information on how the candidate approached the tasks on each of the seven subtests can provide a basis for matching him or her with others who function similarly in a given instructional situation.

In trying to make the candidate more aware of his or her most efficient ways of learning as well as responsibility in the language learning process, counsellors also consider the candidate's preference for particular classroom activities, for example, visual versus oral presentation, explicit grammar explanations, etc. More recently, due to constraints for the candidates to attain a required level 24-month exemption period, this aspect may not be used as often for forming groups but remains important as recommendations to the teachers.

By the end of the interview, after having measured a candidate's rate of learning and level of knowledge, his or her overall ability, and after having assessed his or her learning strategies and areas of particular strength or potential difficulty in the language classroom, the counsellor is in a position to make a prognosis as to the ability of the candidate to learn a second language to a specified criterion of learning, within the maximum time allotted for training as established by policy, in a classroom situation.

Our Service administers approximately 2 400 aptitude tests yearly; of that number, close to 2 000 participate in the orientation process.

In the case of a positive prognosis, counsellors make a recommendation or **training plan** consisting of the learning approach, the starting lesson and the rate of progression. An estimated duration is also established for each student. The prognosis, be it positive or negative (13% of the population received a negative prognosis during 1987), is conveyed to the candidate at

the time of the interview. Needless to say, a positive prognosis does not mean a guarantee of success.

THE RECOURSE MECHANISM

Since the revised policies of October 1981 and consequently the great impact of the prognosis on the candidate's career, the orientation process has been modified to include both controls and a recourse mechanism: the possibility for the candidate who receives a negative prognosis to have a second interview with another counsellor or a case review.

The PSC is responsible for staffing and an appeal system is available to all those who have applied for a position, that is, all candidates can appeal the decisions taken during the staffing of a position. The recourse mechanism is a first step before an appeal. With a mind to ensuring that each candidate receive as just and fair a treatment as possible, two internal review mechanisms have been provided for:

- **Automatic review:** Each case receiving a negative prognosis is automatically studied by counsellors or by a manager having had no previous involvement with the file. The purpose of this review is to check whether all elements, likely to affect the prognosis, have been given proper consideration.

- **Review at the request of the candidate:** If the negative prognosis has been maintained following the automatic review, the candidate may request a second interview with another counsellor. This second interview is held with as little delay as possible. Following the second interview or case review, a committee meets to check that the reasons allegated by the candidate have been considered and that the proper procedures have been adhered to. The final decision is then made as to whether or not the prognosis is upheld.

Twelve percent of those having received a negative prognosis ask for a second interview and 0.7% (approximately 3 persons per year) carry their complaints through to the appeal process.

When the decision after the recourse mechanism is challenged, it is taken to a Board of appeal in the PSC; this is an option for all candidates competing for a bilingual position. In some instances, candidates hire education specialists or even their own private laywers to defend their case. It should be noted that the validity of the aptitude tests presently used at the PSC was not once overruled in the final decision of the Appeal Board.

THE FOLLOW UP PROCESS

The Orientation Service also provides individual counselling to public servants during their language training. The counsellors act in a consultative capacity with the aim of solving individual training problems. A continuous on-course counselling service implies that the counsellors keep in contact with the student, the teacher, the pedagogical advisors and the

managers. It helps in adjusting classroom practices to the individual needs of the students. The systematic exploration of the aptitude tests -- the profiles being used as basic criteria -- is continued throughout the whole training period and provide us with constant confirmation of the usefulness of the tests along with reliable statistics. Furthermore, there is repeated evidence that the instructional environment can be modified so as to exploit to their utmost the strengths and the learning strategies of the students. At least one counsellor is available for the students at all times.

APTITUDE, LENGTH OF TRAINING TIMES AND SUCCESS

Because of changes in the training program and in the final test of certification, the times students take to achieve A, B or C proficiency in oral interaction are periodically calculated for students of different levels of aptitude A, B, C and D (in descending order of aptitude). Typically oral interaction is the most difficult of the three skills to attain and training times are based on the time required to achieve standards in oral interaction. These new calculations are then used by the Orientation Service to arrive at recommended training times and along with initial language proficiency scores, to decide where to place students in the program.

Comparing training time data from 1985-87 to an earlier length of training study in 1978-79, it is clear that these times have been reduced by close to 200 to 300 hours for most of the Anglophone student population. This time saving has been the result of efforts to train students more efficiently and was achieved by the introduction of a compressed and more streamlined program and a longer student day. Furthermore, as previously mentioned, since 1981 candidates with a better chance for success in language training have been selected. Students more likely to fail the SLE after completing training, that is, those with low aptitude and low initial proficiency, have been largely eliminated from the training population (see table 1).

Table 1

Percentage of Students in Training by Aptitude Level

Level	1975 N=2 140 %	1984-87 N=2 144 %
A	13	14
B	28	43
C	35	40
D	24	3

While training has become more efficient since it generally takes less time, it has not become more effective if success rates are considered. This result was highlighted in a recent study on success rates prompted by concern

over the rate of success on the first SLE administration (students are permitted three tries following language training) set by the LTP. While it should be recalled that almost all students eventually succeed within the overall time spent in training, for the entive period of 1984-87 that the study covered, the first try success rate was about 64% for Anglophone students taking French training. For 1986-1987 it was somewhat lower, at 58%. This compares to a success rate of about 56% for 1981-82.

The study attempted to discover the factors affecting this success rate. While target proficiency level, aptitude level, and initial language proficiency have always been related to success,study of other factors thought to possibly be related low success rates such as the length of the program, the accuracy of the teacher supervisors who decides student readiness for testing, the test assessor and region of training and testing was inconclusive. It was suspected, however, that students were being sent too early by the teacher supervisors. This explanation is supported by an examination of student success rates within the recommended training times. The study showed that from 68% to 74% of Anglophone students succeeded within the recommended time for an increase of 4% to 10% over the first attempt success rate. There is still a training time inaccuracy rate of approximately 26% to 32%; that is 26% to 32% of the students judged to be capable of succeeding within the time recommended, do not succeed. However, it is not clear whether the pedagogical treatment also recommended by orientation counsellors in arriving at the recommended training time is carried out.

LIMITATIONS AND CONCERNS: Need for a Parallel Test

The Orientation Service, in its current situation, does encounter problems with regard to aptitude testing. The aptitude tests standardized for the population we deal with and available to us presently are limited in number. The MLAT answers our needs in most cases but we do have retesting situations where we would welcome a parallel test so as to verify whether the candidate's allegations or excuses for having done poorly on the test are justified. The problem often arises during the recourse mechanism. In the case of appeals, even though such instances are few and far between, it would be an additional help to have a parallel test we could administer to the candidate. The chairpersons presiding over the appeals as well as those designated to defend the candidates have often made such a request.

In addition, because of the availability of the MLAT on the market, especially in our regions across Canada, we have candidates coming into the Public Service who have already taken the test. We feel the security of the results may have been compromised in some cases.

It is obvious that our task would be make easier if we had one or more parallel tests. Certainly both the candidate and our organization would stand to profit by the option.

LIMITATIONS AND CONCERNS: Predictive Accuracy and Changes in the LTP

Because of the considerable changes in program orientation, in policies, in the final test of proficiency and in the training population, it is possible that the strength of the relationship between the MLAT and success in the SLE has been reduced. It is clear that the relationship is still there, if somewhat reduced.

Table 2 shows the success rates for beginning students within the time recommended by Orientation Service reported in a 1977 study (Wesche, 1981).

Table 2

Percentage of Student Success by Aptitude Level

Level	1977 N=2 909 %
A	95
B	89
C	82
D	60

In this table higher aptitude level students have greater success rates than lower aptitude level students, particularly D level students. These students were taking audio-lingual courses and were being evaluated with the more knowledge-based LKE.

Table 3 shows first attempt success rates for students in the 1984-1987 sample. These students were being given a more functional-communicative language training treatment and were being evaluated with the more performance-based SLE. As well, as mentioned previously, the time frame for their training had been reduced by 200 to 300 hours compared with the students of 1977. These students include both beginners and those who started at more advanced levels.

Table 3

Percentage of Student Success on First Attempt by Aptitude Level

Level	1984-87 N=2 144 %
A	80
B	68
C	55
D	56

The success rates within the recommended training times are not available by aptitude levels for the 1984-87 study and it is not certain to what extent first attempt success rates were influenced by the suspected practice of teacher supervisors' sending students for testing before they are ready. Furthermore, while in the 1977 study students were generally sent to try the LKE at the end of the training time recommended by Orientation officers, some may have been sent earlier than required. Nevertheless, the general lowering of success rates by aptitude level suggests a possible change in the link between aptitude and the new criterion measure.

While it is not clear from these data why the relationship between the MLAT and the final measure of success may have changed, several possibilities for this change exist. The change from structural to communicative focus of the criterion measure may be one reason, while the change in program orientation from audio-lingual to communicative/functional may be another. Some evidence that the introduction of a more communicative approach and of a performance measure of success may be changing what is required as aptitude to succeed in training was shown in a study reported by the LTP in 1978. This study was designed to examine the criteria for selecting students for the Suggestopedia approach which was being experimented at the time. The methodology was considered to be oriented to communication and to differ substantially from the audio-lingual approach being used for students in the main stream of courses. Correlations between the MLAT, the more structural criterion measure of the time, the LKE, and a communicative test which had been trial-tested but not standardized, are displayed in table 4. Similar correlations between total MLAT aptitude scores and the LKE were achieved for both groups; however, lower correlations appear for both groups between total MLAT aptitude scores and the Test de communication, suggesting a different relationship between these measures of aptitude and success in a communicative test.

Table 4

Correlations between Aptitude, the LKE and the Test de communication for Dialogue Canada and Suggestopedia Groups, 1978.

	Suggestopedia N=42	Dialogue Canada N=26
LKE Speaking	.52	.54
Test de Communication	.34	.43

CONCLUSION

In conclusion, the Public Service Commission experience illustrates possible uses of existing language aptitude tests. Together with attitudinal, physiological and academic background data gathered through questionnaires and carefully conducted interviews, they form a basis for estimating each candidate's likelihood for success and probable rate of progress; they also indicate potential problem areas. Language aptitude measures are thus used both prognostically and diagnostically to improve the effectiveness of the language training program.

Our concern remains in trying to experiment with other aptitude tests since the large number of tests administered and their fundamental impact on the staffing process seem to warrant, at times more urgently than others, a parallel test or other ways of predicting success on language training.

Of equal concern are the possible effects of changes in the training approach and particularly in the final measure of success on the usefulness of the measures presently used to select students and to recommend training periods.

It is evident that the LTP has much faith in the MLAT and that it will continue to play a major role in the placement and treatment of students. The question now is to what extent other measures or procedures could be added or adapted to improve the placement process.

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